

## *Amanita eijii*—a New Name for *Amanita cokeri* f. *roseotincta*

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**Abstract:** *Amanita cokeri* f. *roseotincta* is raised to the rank of species, and a new name, *A. eijii*, is proposed for it. Specimens of this species collected from China were misidentified as *A. rubescens* or *A. vittadinii*. Revision of the collections was made.

**Key words:** new rank; new name; revision; *Amanita*; *A. eijii*

## *Amanita eijii*——*Amanita cokeri* f. *roseotincta* 的新名称<sup>\*</sup>

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**摘要:** 将 *Amanita cokeri* f. *roseotincta* 提升到种级, 新名称为 *A. eijii* (卷鳞鹅膏)。我国本种的标本曾被误定为 *A. rubescens* 或 *A. vittadinii*, 对此也作了订正。

**关键词:** 新等级; 新名称; 标本订正; 鹅膏菌; 卷鳞鹅膏

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While studying the Chinese Amanitae, the author reviewed a few collections of *Amanita cokeri* f. *roseotincta* Nagas. & Hongo, originally described from Japan<sup>[1]</sup>. It seems to be true that the East Asian mushroom deserves the rank of species. Because *A. roseotincta* (Murrill) Murrill<sup>[2]</sup> has already been present, a new name, *A. eijii*, is proposed for *A. cokeri* f. *roseotincta*. Specimens of this species collected from China were misidentified as *A. rubescens* or *A. vittadinii*<sup>[3-4]</sup>. Revision of the collections was made. The results are reported herein. Methodology and notation follow those of Yang<sup>[5]</sup> and Yang et al.<sup>[6]</sup>.

*Amanita eijii* Zhu L. Yang, nom. nov.

Replaced synonym: *Amanita cokeri* f. *roseotincta* Nagas. & Hongo, Trans. Mycol. Soc. Japan 25: 373, (1984).

Etymology: "eijii" is named in honor of Dr. Eiji Nagasawa.

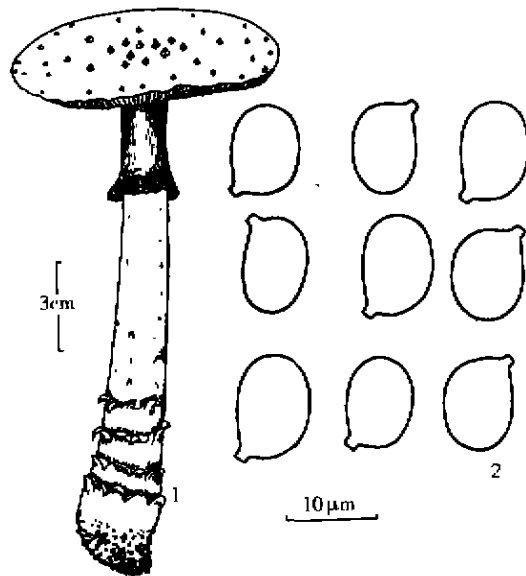
Basidiocarps medium-sized to large (Fig. 1 - 1). Pileus 6~13 cm in diameter, convex to applanate, occasionally concave, dry or subviscid, whitish to dirty white, but becoming pinkish to brownish with age over disc; volval remnants pyramidal to subpyramidal or subconical, 1.0~3.5 mm high, dirty white to pinkish or brownish,

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randomly arranged; margin smooth, appendiculate. Lamellae free, white to cream, becoming pinkish when injured, crowded, 0.5~1.0 cm in height; lamellulae attenuate, evenly distributed. Stipe 5~13 cm × 1~2 cm, subcylindric or slightly tapering upward, with apex slightly expanded, subconcolorous with pileus; basal bulb clavate to ventricose or subfusiform, 1.0~2.5 cm in diameter, 3~5 cm long; upper part of bulb and lower part of stipe usually covered with distinctly reflexed, irregularly or incompletely concentrically arranged, pinkish to brownish squamules. Annulus subapical, pendant from attachment 1.5~2.5 cm below apex of stipe, white, finely and radially striate above, persistent or fugacious; margin often with whitish warts. Trama white, but becoming pinkish with age when cut. Smell mild.



1. Basidiocarp; 2. Basidiospores

Fig. 1. A basidiocarp and basidiospores of *Amanita eiji* (HMAS 53957)

Lamellar trama not well rehydrating, probably bilateral. Basidia 50~60 µm × 10~12 µm, clavate, 4-spored, occasionally 2-spored; sterigmata 4~6 µm long; basal septa usually with clamps. Basidiospores (Fig. 1 - 2) [147/8/3] (8.5~) 9.0~11.0 (~13.0) µm × (6.5~) 7.0~8.0 (~8.5) µm [Q = (1.15~) 1.21~1.47 (~1.73), Q = 1.36 ± 0.08], broadly ellip-

soid to ellipsoid, rarely elongate, amyloid, colorless, hyaline, thin-walled, smooth; apiculus small. Lamellar edge appearing as sterile strip up to 150 µm wide in side view, composed of 2~7 µm wide, loosely arranged and ± running parallel to the lamellar edge, somewhat gelatinized filamentous hyphae; inflated cells broadly clavate, ovoid, subglobose to ellipsoid, 30~45 µm × 15~25 µm, thin-walled, colorless, hyaline. Pileipellis 50~70 µm thick, not well differentiated from pileus context, comprising radially and compacted arranged, 3~7 (~12) µm wide, hardly gelatinized, thin-walled, colorless, hyaline or yellowish refractive, filamentous hyphae; septa often with clamps. Volval remnants on pileus composed of ± vertically, at wart base subvertically arranged elements; inflated cells very abundant to dominant, but becoming fewer in the base of volval remnants, subglobose to ovoid (25~80 µm × 20~60 µm) or ellipsoid (55~100 µm × 35~60 µm), sometimes broadly clavate (60~120 µm × 25~45 µm), often in chains of 2~4, thin-walled to slightly thick-walled (up to 0.5 µm thick), colorless, hyaline, sometimes with brownish, vacuolar pigmentation; filamentous hyphae scattered to fairly abundant, 3~8 µm wide, thin-walled, colorless, hyaline to subhyaline, often clamped; vascular hyphae rare or locally conspicuous, 3~12 µm wide. Volval remnants on stipe base: the apex of squamule comprising abundant to very abundant, ovoid to subglobose or ellipsoid, irregularly arranged, often single and terminal, inflated cells (40~90 µm × 20~50 µm), mixed with fairly abundant to abundant, 3~8 µm wide, filamentous hyphae. The rest part of squamule comprising longitudinally arranged. (fairly) abundant, fusiform to broadly clavate, terminal cells (120~180 µm × 25~35 µm), mixed with (fairly) abundant, often clamped, 2~10 µm wide, filamentous hyphae. Stipe trama composed primarily of longitudinally arranged, long clavate, terminal cells, 200~350 µm × 25~45 µm, mixed with scattered (in interior) to fairly abundant (on stipe surface), 2~10 µm wide, sometimes

clamped, filamentous hyphae; vascular hyphae rare.

Specimens examined: CHINA. ANHUI [AN-HWEI] PROVINCE: Huangshan Municipality, Huangshan, 30-VII-1957, S.C. Teng 5190 (HMAS 21105). HUNAN PROVINCE: Wugang [Wukang] County, Yunshan [Yün-schan], alt. 1 280 m, 14-VII-1918, H. Handel-Mazzetti 2618a (WU 12465). GUIZHOU PROVINCE: Jiangkou County, Fanjingshan, 28-VII-1982, Y.C. Zong & H.A. Wen 239 (HMAS 53957).

Habitat and Distribution: on ground in broad-leaved or mixed forests. Described from Japan, and firstly reported from China by Huang<sup>[7]</sup>.

*Amanita eijii* is similar to *A. cokeri* (J.-E. Gilbert & Kühner) J.-E. Gilbert, originally described from North America, but the latter has a white pileus with white to brownish volval remnants, a white trama of basidiocarp, more strongly gelatinized pileipellis and significantly larger basidiospores with a higher Q<sup>[8-9]</sup>. *Amanita eijii* is very closely related to *A. timida* Corner & Bas, described from Singapore<sup>[10]</sup>. However, the latter has globose to ellipsoid, smaller basidiospores, Nagasawa & Hongo<sup>[1]</sup> emphasized that the annulus of *A. eijii* is fibrillose-lacerate at the underside. This character might not be consistent.

Teng 5190 was identified as *A. rubescens* by S. C. Teng<sup>[3]</sup>. However, *A. rubescens* has, among other features, non-appendiculate pileus margin, no reflexed squamules on the lower part of stipe, no clamps, and smaller spores. Handel-Mazzettii 2618a was regarded as "*Lepiota vittadini* (Mor.) Fr." [ $\equiv$  *Amanita vittadini* (Moretti) Vittad.] by Lohwag<sup>[4]</sup>, but the latter has cylindrical to subcylindrical stipe, white trama of fruit body, larger and slightly thick-walled basidiospores, and subcylindrical to elongate-fusiform cells in the volval remnants on the pileus<sup>[8]</sup>. Although the name "*A. vittadini*" is frequently ap-

plied to Chinese *Amanitas*, no reliable identifications can be traced. Under the name "*A. vittadini*", Li et al.<sup>[11]</sup>, and Ying & Zang<sup>[12]</sup> cited the sole collection, namely MHHNU 4223, and HMAS 40559 respectively. Re-examination revealed that MHHNU 4223 is *A. fritillaria* (Berk.) Sacc., and HMAS 40559 is *A. virgineoides* Bas., HKAS 4468, regarded as *A. vittadini* by Zang et al.<sup>[13]</sup>, is immature. It may be *A. virgineoides* for its pure white fruit body with a subglobose bulb on the stipe base.

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